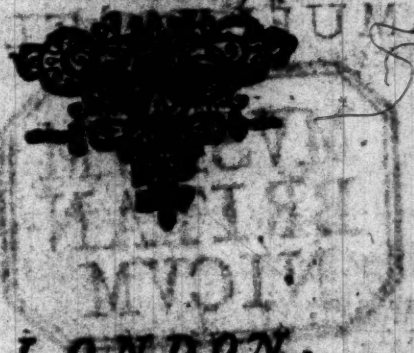
# HEREFORDSHIRE ORCHARDS,

## A PATTERN For all England.

Written in an Epistolary Address to *Samuel Hartlib* Esq;

By *I. B.* D. John Beale

Z. 83.



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To my very worthy Friend,

The zealous ſollicitor of Chriſtian peace

Amongſt all Nations,

The conſtant Friend of diſtreſſed Strangers,

The true-hearted lover of our Native Countrey,

The ſedulous advancer of Ingenuous Arts,

and Profitable Sciences,

And the Principall Contriver of

Generall Accommodations,

SAMUEL HARTLIB Eſq;

MVSEVM
BRITAN
NICVM

5 Dec

SIR,

YOur industrious endeavours for the benefit of all men, and particularly for the good of this Nation, hath well deserved the gratefull acknowledgement of all good men, and of my self in speciall: for that in my rurall retirement I have received some profit, and very much innocent and refreshing delights in the perusall of those treatises, which are by your diligent hand communicated to the publick.

My education was amongst Scholars in Academyes, where I spent many yeares in conversing with variety of books only. A little before our wars began, I spent two summers in travelling towards the South, with

purpose to learn to know men and forreign manners. Since my return, I have been constantly imployed in a weighty office, by which I am not disengaged from the care of our publick welfare in the peace and prosperity of this Nation; but obliged to be the more sollicitous and tender in preserving it, and promoting it. Wherefore, taking notice that this County is reputed the *Orchard* of *England*, and (in the generality of good husbandry) excelleth many other places; I offer it (as my duty) to give you some plain and unpolished account of our *Agriculture* in *Herefordshire*: which I do the more willingly undertake, for that I do not yet know of any other addresse is made unto you from this County. Here I observe the wisest and best of our Gentry to be very carefull in setting forward such kind of husbandry, as best agrees with the nature of the soyl where he inhabiteth. From the

the greateſt perſons to the pooreſt cottager, all habitations are encompaſſed with Orchards and Gardens; and in moſt places our hedges are inriched with rowes of fruit-trees, pears, or apples, Gennet-moyles, or crab-trees. Of theſe, the Pears make a weak drink fit for our *hindes*, and is generally refuſed by our Gentry, as breeding wind in the ſtomack; yet this drink (till the heat of Summer hath caught it,) is moſt pleaſing to the female palat, having a reliſh of weak wine mixed with ſugar. If mingled with ſome harſh kind of apples, it makes a happy mixture; and our obſervant houſe-keepers know how to mix them to the beſt advantage. Some peares are apt to incline the drink to be roapy, and they are known by giving a wheyiſh colour to the liquor. I know a good husband that cuts down and deſtroyes ſuch peare-trees from off his ground, calling them the worſt kind of weeds.

For others are ſo nice as to refuſe the drink, and women love it beſt, as ſweeteſt, till it be roapy. Moſt other kinds of perry are of a more waterish colour, then apple-cider, and more luſhious. The white-horſe-peare yields a juyce ſomewhat neer to the quality of cider; and the neighbourhood of *Bosbury* is famous for a peculiar perry, which hath many of the maſculine qualities of cider. It is as quick, ſtrong, and heady, high-coloured; and retaineth a good vigour two or three Summers, yea in great veſſells and good cellars many yeares, before it declineth. The fruit is ſo hard and courſe, that a man cannot endure to bite a morſell of it, and a pig will refrain it. This *Bosbury* peare is there called the *Bareland* peare: and as the liquor approacheth to apple-cider in colour, ſtrength, and excelleth in durance; ſo the bloom cometh forth of a damask-roſe colour, like apples, not like other

ther peares. Our Gennet moyles are commonly found in hedges, or in our worſt ſoyle, moſt commonly in *Irchinfield*, or towards *Wales*, where the land is ſomewhat dry and ſhallow. This fruit is nice, and apt to be diſcouraged by blaſts, and we do ordinarily expect a failing of them every other year, eſpecially in dry ſoil; and the reaſon is apparent and neceſſary. But this fruit makes the beſt cider in my judgement, & ſuch as I do prefer before the much-commended red-ſtrak't muſt. For this Gennet moyle, if it be ſuffered to ripen upon the tree, not to be mellow but to be yellowiſh and fragrant, and then to be hoorded in heapes under the trees, a fortnight or three weeks before you grind them; it is (at diſtance) the moſt fragrant of all cider-fruit, & gives the liquor a moſt delicate perfume. So, for tarts and pyes, it is much commended. The Crab is commonly ground for Verjuice,

and ſometimes hoorded till neer *December*, and then mingled with cider, or waſhings of cider, to make a mordicant cider, which doth well pleaſe our day-labourers; and would ſurely well agree with a *French* peaſants palat. And, for a freſh wonder, I aſſure you, that we have lately found out, that one of our moſt delicate kinds of Cider is made of a kind of Crab, called a *Bromsbery* Crab, thus hoorded: it being much like a ſtomack wine, of a very pleaſing ſharpneſſe. This experiment is not yet known to many of our Countreymen, it being reſerved to few as a novell myſtery. I have ſometimes tryed the Cider of Pippins only, well ripened, not green windfalls, nor overripened, and ſomewhat hoorded: and I find it to be a very pleaſant drink, and do conceive it to be the moſt wholeſome, and moſt reſtorative of all ſorts of Cider.

I need not tell you how all our villa-

villages, and generally all our high-wayes (all our vales being thick set with rowes of villages) are in the spring-time sweetned, and beautyfied with the bloomed trees, which continue their changeable varietyes of Ornament, till (in the end of Autumn) they fill our Garners with pleasant fruit, and our cellars with rich and winey liquors. Few cottagers, yea very few of our wealthiest yeomen do tast any other drink in the family, except at some speciall festivalls, twice or thrice in the year, and that for variety, rather than with choice.

Orchards being the Pride of our Countrey, and the Scene of my present discourse, I will offer unto you two Observations upon that argument, as properly directive to them that can affect the pleasure or profit, which must needs be, in many respects, very much: As, for that they do not only sweeten, but also purifie the

the ambient aire, ( which I conceive to conduce very much to the conſtant health and long lives, for which our County hath been alwayes famous; ) and for that they fence our habitations and walks from the ſtroke of winds and ſtorms in the Winter, and afford us ſhelter & ſhade in the heat of Summer; and (if I may acknowledge gratefull trifles) for that they harbour a conſtant aviary of ſweet ſingers, which are here retained without the charge or violence of the *Italian* Wiers.

My firſt Obſervation is this; I conceive that, if other Countreys would ſubmit to the ſame patience and induſtry, as is uſuall amongſt us, they might partake of a great meaſure ( at leaſt) of the ſame bleſſings. As we ſee in our borderers of *Shropſhire*, *Worceſterſhire* and *Gloceſterſhire*, and alſo in *Somerſetſhire*; and much more in *Kent* and *Eſſex*, &c. My reaſon I take from the wonderfull difference

of

of ſoyles where we abound with rich Orchards. About *Bromyard*, a cold air, and a ſhallow barren ſoyl, yet ſtore of Orchards of divers kinds of ſpicey and ſavoury apples. About *Roſſe* and *Webley*, and towards the *Hay*, a ſhallow, hot, ſandy or ſtony rye-land, & expos'd to a changeable air from the diſguſts of the black mountain; yet here, and all over *Irchinfield*, and alſo about *Lemſter*, both towards *Keinton*, and towards *Fayremile* (which makes a third difference of ſhallow and ſtarvy land,) in all theſe barren provinces, as good ſtore of undeceiving Orchards, as in the richeſt vale of the County, even by *Frome* banks. Only, as I fore-noted, where the dryeſt fruit-trees are planted in a very hot, ſhallow, and dry ſoyle, there we muſt be content with a full and certain bleſſing every ſecond year. This being alſo allowed, that ſome ſoyle and ſome air is more agreeable for ſome kinde of fruit,

fruit, than for other: as for example, *Worceſterſhire* is more proper for peares and cherryes, than *Herefordſhire*, and *Herefordſhire* more proper for Apples. The reaſon of the difference may in part appear by this following illuſtration. Where the turf is very ſhallow, the rough ſtarvy ground (which in this countrey we wrongfully call *Marle*) hinders the tender root of the apple-tree from deſcending deep enough for due nouriſhment, and fit ſhelter. There (as in the ground which we eſteem the moſt barren) the root of the pear-tree, having a more piercing vigour, breaks his way through this courſe Marle, as it will alſo cleave through ſome veins of rocks and ſtones; and, under this ſtarvy ground, it finds a more congeniall and richer nouriſhment; as appears by the ſtore of fruit, fair and juicy, and alſo by the rinde of the tree, ſmooth, bright-coloured, and free from

from moſs. This we alſo note, that in a deep ſoyl, that is moſt kind for apples, if the root of a pear-tree deſcends deep into a ſoft clay ground, the tree ſpends all his ſtrength in growing downwards, and becomes leſſe ſpacious, leſſe beautifull in the head, and leſſe fruitfull. And where ſome peares find great difference of ſoyle, whether grafted or planted by the ſtock, there it differeth ſometimes in bulk, and oft times in other qualities very much. Which ſeemeth to me to explain, why there is ſuch different kinds of pears in every Countrey: their ſhape and their nature, and therefore alſo their names, being changed ſo often, and ſo eaſily.

Alſo I have frequently noted, that the richeſt Cider, and the beſt-taſted apples for the table, do grow in the ſoyle that is leſſe deep and leſſe commended for other uſes, as in a high ground, or dry land. And you ſhall find the better-taſted fruit to be more

wrethed

wrethed or wrinckled, or spotted with warts, moles, or freckles, or of a more russet, or yellow colour. The other apple, that comes from the richer and lower ground, is more pallid, more plump, but more wateriſh and insipid. I conclude this observation with this direction, That since no kind of soyle should wholly discourage us, and yet much regard must be had of fitting the fruit to the soyle, therefore we must employ our first care in the plantation of a nursery, where our experiences may daily increase, and the plants also be educated, prepared and fitted for the neighbouring soyle. For what *Columella* saith of Vines, I may as truely say of Fruit-trees; *Quod ex longinquo petitur, parum familiariter nostro solo venit, propter quod difficilius convalescit alienum exterae regionis. Optimum est ergo eodem agro quo vitem dispositurus es, vel certe vicino, facere seminarium: idque multum refert*

*fert loci natura &c.* de arbor. cap. 1.

My ſecond obſervation is intended to encourage the plantation of a Nurſery, by directing the ſure way how to fit the ſoyl with the greateſt variety of fruits, and alſo to obtain the ſpeedieſt reward together with a yearly delight in novelties, & a like growth in experiences.

But becauſe I muſt now imbarkinto ſome paradoxes, which will not eaſily obtain belief, & leaſt of all amongſt our own Countreymen here in *Herefordſhire*, for ſome reaſons which hereafter will occurr, I will make my entrance with a plain and true ſtory.

Some years ago I read a ſmall treatiſe of Orchards and Gardens written by *VVilliam Lawſone*, a North-countrey man. In it I found many aſſertions which ſeemed to me ſo ſtrange, ſo contrary to our generall opinion, ſo diſcordant from our daily practice, and ſo incredible, that I could not forbeare my Printed 1626.

ſmiles

ſmiles. I related the particulars t
all our beſt Artiſts. Every man con
firmed me, that the treatiſe wa
wholly ridiculous, and in no reſpe
worthy to be examined and weigh
ed: yet I thought I found man
ſignes of honeſty and integrity in th
Man, a ſound, clear, naturall wit, an
all things atteſted and affirm'd upo
his own experiences. This raiſed m
wonder the more. Amongſt man
particulars, ſome were as followeth.

1. That the beſt way to plant a
Orchard were to turn the groun
with a ſpade in *February*, and to ſo
from *February* till *May*, every month
ſome kernels of the beſt and ſounde
apples, or peares &c. finger deep, a
a foot diſtance: And by removin
the reſt (as time and occaſion ſhoul
adviſe) to leave the likelieſt plant t
reſide in the naturall place unremo
ved. *Ch.7.pag.17.*

2. That the kernels of every ap
ple would bring forth apples of th
like kind. *Chap.7.pag.18.* 3. Tha

3. That by the leaves of each spiring plant you might distinguish each kind of fruit, whether delicate or harsh, &c. *Ch. 7. pag.* 18.

4. That trees thus raised might be preserved or continue for a thousand years, &c. *Chap.* 14. *pag.* 47.

5. That apples either grafted, or any time removed, could never be found, durable, or otherwise perfect.

1. The first of these Assertions was rejected, as dilatory, and retarding our hopes & reward for half an age.

2. The second was contradicted by daily experience, which voucheth that many apple-kernels will degenerate to crabs, at least if taken from apples planted on a crab-stock: and that crab-kernels are better for a plantation, than any apple-kernels.

3. The third note was wholly unknown and unobserved in our Countrey.

4. The fourth, like an unreasonable phansy.

5: The fifth, as refuted in all our Orchards every where.

Notwithſtanding theſe oppoſitions, I ſtill retained my good opinion of the mans honeſty and experience. Therefore I reſolved to make exact triall with patience. I dig'd holes of three foot breadth in a parcell of ordinary clay-ground. [Note that the whole piece of clay-ground was turned ſomewhat deep with the ſpade before, that the ſetlings might gather root as well in that vulgar ground, as alſo in the finer mold.] I enquired ſlips of ſeverall trees that grew without graffing, and bore ſeverall fruits of their naturall kind: theſe I placed each kind round about the verges of the ſeverall holes. By diligent enquiry the firſt Spring I found fourteen ſeverall ſorts of theſe naturall apples, the fruit much differing in taſt, ſhape and colour; ſome only green and ſowriſh, ſome red-ſtraked, ſome party-coloured, and very pleaſant, ſome

ſome table-fruit in Summer, ſome Winter fruit, ſome cider fruit. Of all theſe the *Kentiſh* codling was by odds the worſt: not many better then the *French* Cornell. Having placed theſe ſlips in the border of the hole at a foot diſtance, I filled up the hole with a fine kind of garden-mould, carryed thither in barrows. This I raiſed not in Tumps, for I foreſaw the inconvenience, that it would be a harbour for ants or piſmires. I kept it alſo at an equall levell, that the rain might not lodge there, and corrupt the young roots. In the midſt of this fine mold, in the moſt temperate weather, I did monethly, from Autumn to the next Spring, ſet kernels of the fineſt ſort of apples, with delineating in a ſciograph the ſeveral kinds in ſeverall places. I now find that the kernells of apples grafted on crab-ſtocks prove not all crabs, nor (as I gueſſe) altogether of the kind of that apple, whence the kernell was taken.

2ly. That, as the mold is finer where they first grow, so the fruit seemeth more civil, and in course ground they degenerate towards the crab. Our neighbours, for a nursery, sow the drosse or must (as we call it) of apples ground in a cider-mill. But I have noted the faireſt kernells to be bruiſed in the mill, the remainder being ſmall, and ſown in courſe land, become a kind of crabs.

And that the kernells of naturall apples do very much propend to the kind of which they are deſcended. This was neglected, and therefore unknown to our neighbours, who had no need of this curioſity, as being ſo addicted to graffing, that they take not notice of any naturall apple, except the Gennet moyle, the Kydoddin, the Sweeting, and the *French* Cornell; which are found in all places. Tis ſure that kernells of the ſame apples, in a far differing ſoyl, do produce a different apple; but

but (as I said) still with some inclination to the originall, if it be the kernell of an ungrafted apple. And this may advertise the best season of designing variety; namely, in application of choice compost to the very kernel, as *Gab. Plat* prescribeth *Exp.* 14. *pag.* 210. of the Additions to the excellent Legacy. All other stories, of powring liquors into the bark, or bulk of the tree, are effete and idle phansies, for nine dayes wonder.

3ly, I find the truth, & that much more might be added to *Lawsons* rules, of distinguishing the hopefulnesse of the fruit by the first leaves of the yearling plant. For a short and dark-green leaf prognosticateth a crabbed fruit. With a larger leaf and thick, but also dark-green, I have found a good Winter-apple, but the stock hardy to endure a stiffe clay-ground. A fady willowish broad leaf noteth a flat, insipid apple, as the *Kentish* Codling, which holds out

well againſt blaſts. A paler green, as the Poppinjay, or barbery leaf, ſpecially if the leaf be limber alſo, noteth a delicate fruit: and the broader the leaf, the fairer that fruit. A wrinkled leaf, neither very dark, nor very light, proves red-ſtrak't crab-ſtocks have reddiſh tops. More particulars will occurr by ordinary obſervation.

4ly, For the incredible durance of apple-trees to a thouſand years, I have upon much experience & many reaſons much abated the preſumption of my cenſure. 'Tis certainly true (as *Gabriel Plat* in the foreſaid place noteth,) that if a man aime at his preſent profit, then graffing is his way: but if he aime at the profit of his poſterity, then it is beſt not to graft at all. This I add, that moſt ungraffed apples are apt by the overweight of their fruit to leane towards the ground: and I have ſeen many of them quell'd quite to the ground; where they do renew their ſtrength,

and

and get up again into many Trunks, in a continued order, answerable to the old fable of the Giant *Anteus*. Every aspiring Trunk of some of these naturall apples, is much more lasting than any grafted fruit-tree: and many very aged people have assured me, that they have discerned no difference either of their growth or decay, in their whole age from their childhood. I will tell you upon my credit the wonders of one tree of this kind, now growing in *Ocle Pitchard*: the fruit is not very sappy, nor pleasant; the leaf dark-green, and stiff. My known friend (for try-all) made of that tree five of our large hogsheads, consisting of sixty four Statute gallons of cider, without the mixture of any water. It ordinarily yieldeth four hogsheads, and seldome or (as they assure me that dwell there) never faileth of three. Yet few of our Countreymen have heard of it, or take notice of it. This

tree hath had very many uprisings, so that I conceive it hath been many hundreds of years making this progresse. My dear alliance, Mr. *Thomas Taylor*, was owner of it many yeares, and dwelt alwayes in that parish. He is now past eighty yeares old, of firm strength and fresh memory: yet he affirmeth, that he never could discern any change in the tree. And his wife for many years tried to plant the branches, but was utterly discouraged by their slow motion. I have for three yeares tried some branches, which seem only to keep a faint life, with very little progresse. The ground on which this great tree growes, is pasture, and seems not in the age of man to have been broken up, or relieved with compost, or fresh mold; which may shew, that it is a very hardy plant. So much upon the adventure of mine own credit, which may be examined by a thousand witnesses, to confirm the credit,

credit, or rather gueſſe and propoſall, of Mr. *Lawſon*.

5ly. For duration of the fruit-tree, much care muſt be had in the removall, which ſhould be ſoon after the leaf is faln, when the Autumnall rains have ſoftned the earth at the roots, that the roots be not bruiſed or wounded in the removall: and then the tree ſhould keep the ſame poſition towards the heavens; the roots lay alſo in the ſame poſture, the ſmaller fibers or bearded roots rather cut at the ends, then crumpled up: and the earth in which the ſtock is laid, ſomewhat of the ſame kind, but bettered, and mellowed, not with undigeſted muck, but with fine mold, and ſhovellings of the fold. If the roots are cut or bruiſed, to the ſame proportion the branches muſt be lopped. In a grafted plant every bow ſhould be lopped, at the very tops, in apples and peares; not in cherries and plums. In a naturall plant, the

bowes

bowes should not at all be lopped, but some taken off close to the trunk; that the root at first replantation be not engaged to maintain too many suckers. And this must be done with such discretion, that the top-branches be not too close together; for the naturall plant is apt to grow spiry, & thereby failes of fruitfulnesse. Therefore let the reserved branches be divided at a convenient roundnesse. The branches that are cut off, may be set, and will grow, but slowly. If the top prove spiry or the fruit unkind, then the due remedy must be in graffing.

Neither is graffing to be used only as a remedy. For it doth most certainly improve the kind of the fruit: insomuch that a graft of the same fruit doth meliorate the fruit, as is lately much observed by our *Welsh* neighbours, who do graffe the Gennet-moyle upon the same stock, and thereby obtain a larger apple, more juicy,

juicy, and better for all uſes: and ſome triplicate their graffings (for a curioſity) upon the ſame account.

And it is noted amongſt us, that a pearmain or any other pleaſant fruit either for cider, or the table, is much ſweeter, if grafted upon the ſtock of a Gennet-moyle, or Kydoddin, than if grafted on a crab-ſtock; though much leſſe laſting upon the ſtock of the Gennet-moyle: the Gennet-moyl being alſo leſſe laſting, eſpecially amongſt us, where they are generally planted of large ſetlings, which muſt needs wound them in their very beginnings, and therefore hinder their duration.

Alſo graffing doth much precipitate, or at leaſt expedite the reward, eſpecially if the graffe be taken from a branch that hath ſome yeares conſtantly born ſound fruit plentifully. Truſt not to one yeares triall. *Poteſt enim vel anni proventu, vel aliis de cauſis, etiã naturaliter infœcunda ſemel exuberare:*

*uberare: sed ubi plurimis velut emeritis annorum stipendiis fides surculo constitit, nihil dubitandum est de fœcunditate: nec tamen ultra quadriennium talis extenditur inquisitio*, saith *Columella* in a like case; *lib.* 3. *c.* 6.

1. Thus we see how to hasten the reward both by graffing, and in the choice of the graffe.

2. And how to sweeten the fruit and better it, both by the choice of a pleasing stock and also of a kind graffe.

3. And how to multiply variety in the diversity of compost, especially at the first plantation of the kernell; and I add, with frequent application of pleasant infusions, and liquids, as in which annise seeds, fennel, rosemary, or other agreeable aromaticks have been steeped: yet beware of giving too much juice to a young plant; for that may drown it, or make it lesse gustfull: And I never saw an Orchard prove, where the ground was wet-

ted

ted with a water-gall, or where the moisture did for some time lye there, and could not be drained away. Yet near a running sink of soyled water, I have seen the approaching trees never fail of their fruit.

4. And hence we see how to plant an Orchard that may probably remain to the worlds end. And in this point I have insinuated some part of my paradoxes, by the way of a story, and in pretence of defending another against the opinion & common practise of mine own Countrey-men. Mr. *Lawsons* book I have not now at hand, neither can I record his judgement verbally, but I think I have stuck close to his sense.

He addeth, that the fruit of the naturall plant doth grow better and pleasanter by time, as better at thirty yeares growth than at twenty yeares growth. This I know not. See *Chap. 7. pag.* 18, 19.

Also he requireth much more distance

distance of the trees than we observe as sixty foot at least. Our common Orchards are at twenty foot distance; our best Orchards at thirty at least, by alternative rowes *per quincuncem*. In large crofts of arable, reserved for constant tillage, which is a necessary help to fruit-trees, our best husbands graft high, and preferre *Lawsons* utmost distance, even sixty yards, that the teames may not annoy the trees; and then the trees bear a full load of fruit, and spread to the naturall perfection. This I adde, that if you would have the trees grow tall, and shadow more in Summer, and keep off winds better in Winter, and the fruit the sweeter, then you should plant the closer together, yet never nearer then twenty foot.

To conclude my paradoxes; He that is provided of a nursery, need not be very nicely provident for the longevity of his trees. A small parcell of ground will furnish store for all his grounds,

grounds, and for all his neighbourhood, to play away upon graffings and novell experiments. And to encourage this nurſery, I now ſumm up all with my laſt paradox, That for theſe four laſt yeares, whereof two were very dry Summers, I laid the fruitfull ſprayes of naturall apple-plants in the ground, ſome very ſmall, not two foot above ground, all thereabout; and from the firſt Summer to this preſent Spring, they never failed to bear as thick as traces of onyons. But it is better for the plant, if you pull off the young apples ſoon after they be knitted, the firſt year at leaſt. Some I laid alſo of four yards length under ground, the ſprayes lying ſlope above ground: theſe grow and bear incredibly. Others I ſlope, and pare away the bordering turfe, that the reflected Sun may give me the early benefit of a dwarf Orchard; and theſe againſt Midſummer, are as big as a Ladies

fiſt.

fift. I preſent them to ſtore of witneſſes. If I dwelt neer *Cheapſide*, I ſhould make my new-planted Nurſery as rich as an Orchard. All naturall apples are not of this precocity: the more durable (as I ſaid before) are much more ſullen. Some require a knot for the root, others not: all three the better for it. To ſome a ſmall ſlice from the bark is as good. Before *December*, whilſt the ſpray growes on the tree, by the bluntneſs of the bud you may diſcover what branch will bear fruit the next Summer immediately following, if you cut off the branch, and ſet it before the buds be ſprouted too far forward, (as you may in *February*, or the beginning of *March*.) This (with ſome) will paſſe as a propheſy. A ſore blaſt or *May*-Froſts may deceive you. Of theſe naturall apples there are not paſt ſix or ſeven kinds diſtinguiſhed by proper names amongſt us. I conceive they can never be diſtinguiſhed,

ſhed, for that every individuall alwayes aſſumes a peculiar nature from the infinite variety of compoſt. In this nurſery, 'tis the ſame pains, and no charge, to try the ſeeds of firres, pines, cypres, pitch, &c. which prove better for replantation than in hote beds.

Of the Art of graffing either with the ciens, bud or leaf, I ſhall ſay nothing, becauſe every village amongſt us yieldeth ſtore of Artiſts: and many books ſhew the rules; but in theſe things an Artiſt can teach more in a day, than a book in a moneth.

One reaſon why fruit do ſo abound in this County, is, for that no man hath of late years built him a houſe, but with ſpeciall regard to the proximity of ſome ground fit for an Orchard, which ſhould be of ſome depth, as is commonly towards the foot of a deſcending ground, and frequently with a proclivity towards the South; and the land not too fri-

able or hollow, but somewhat tough, binding and tenacious, least the winds root up the stocks. And many times servants when they betake to marriage, seek out an acre or two of ground, which they find fit for Orchard: for this they give a fine, or double value for years or lives; and thereon they build a Cottage, & plant an Orchard, which is all the wealth they have for themselves, and their posterity.

For Gardens, we have little encouragement to designe more than is for the necessary use of our own families, except our River *Wye* may be made navigable for transportation. And by defect of transportation, our store of cider is become a snare to many, who turne Gods blessings into wantonnesse & drunkennesse. The credit of Cider being of few late years much advanced in the estimation of our best Gentry, who have sought out the right method of ripe-

ripening and hoording the choiceſt fruits, and of finding the right ſeaſon of drawing it, and ſome alſo of bottling it. But I am confident that much more may be added to the perfection of it, when they ſhall alſo apply to it the due ſubtleties of the myſterious art of fermentation.

I found it much amended, by putting pure cider upon the freſh lees of a butt of ſack, newly drawn.

In Vines our Gentry have lately contended in a profitable ambition to excell each other: ſo that the white muſcadell is vulgar, the purple and black grape frequent, the parſly-grape and Frontiniack in many hands.

Wall-nuts belong to our high-way ſides, and are fitteſt for dry and ſtony grounds. I find them for the dryeſt ground of the Nurſery a never-failing companion. In *Columella* we may find many excellent rules how to aſcertain and haſten their

growth, and to mend their quality.

The large Cheſtnut being ſuch a maſculine food for luſtie ruſticks, and ſo much uſed at the beſt tables in *France*, and ſo ſavoury in the condiment of our ſtrongeſt cider with ſalt, I much blame our Countreymen, that we have no more uſe of a food that would ſoon become cheap, common, and laſting.

All theſe nuts and filberts do accelerate growth, (as I have proved,) by the rules of *Columella: In aqua mulſa, nec ninius dulci macerato, ita jucundioris ſaporis fructum, cum adoleverit, præbebit, & interim melius & celerius frondebit, lib. 5. cap.* 10. and again, *de arb.* 22. I cannot tell whether it ſhould not be read, *nec nimis dulci*; but I tryed it in milk, and alſo in ſtale urine ſteep'd in ſheeps-dung, with good ſucceſſe. He adds for an improvement, *Et in medulla ferulæ ſine putamine nucem Græcam vel avellanam*

*nam abſcondito, & ita adobruito. A worthy perſon* tryed the kernells of cherry-ſtones and plum-ſtones, having firſt broken and caſt away the ſhells, and ſetting them in Summer time, aſſoon as they were ripe; and he aſſureth that they got a yeares advantage in celerity.

I do much wonder that ſuch a ſingular honeſt man as *Gabriel Plat* ſhould write, that it is found by experience, that a cheſnut in ten or twelve yeares will grow into a fair tree, able to be the maſter-poſt of a fair building. And the like of the Wallnut, *Exp.* 13. *pag.* 269. *Addit.* to the *Legacy.*

I am at the like wonder at honeſt Cap. *Blithes* precedent of ſmall quick-ſet oaks, that at eleven yeares growth made ſparrs and ſmall building-timber, *Chap.* 25. *pag.* 158. *Edit.* 1652.

Our elme is of ſpeedieſt growth, all timber, alwayes ſhredded to be the talleſt of *Engliſh* trees; and found

in rowes on our high-wayes, and at every cottagers dore, except they be compell'd to give place to fruit-trees.

In many journeys through *Shropshire*, I have scarce seen two elmes of the right kind. The cruſt of the earth there is too ſhallow. But the root of the oaks cleaves through the harder earth, and ſurely finds a marly ſubſtance for his plentifull ſuſtenance to the full depth of his ſtature,

*quod quantum vertice ad auras*
*Æthereas, tantum radice ad Tartara tendit.*
Georg. 2. verſ. 191.

All our hills have ſometimes born oaks, or few failed, and I conceive moſt are very apt for it. But of late the Iron-mills have devoured our glory, and defloured our Groves.

We are generally noted to excell in al kinds of husbandry: our ploughs are light, but we liſten after further directions which come to us through your hands. The rye of *Clehanger* and

and of ſome parts of *Irchinfield* is as good as the Muncorne or Miſcellane of many other Countreys; and our wheat is upon the ground fatre richer than I ſaw any in the fait vale of *Eſome* in *Worceſterſhire* and *Warwickſhire*, as in my travells, I ſometimes examin'd it in the company of other more skilfull husbandmen.

For paſtures we add improvements daily, and as a ſtranger paſſeth by our habitations, by our fences, Orchards, paſtures, arable, he may diſtinguiſh a well-ordered houſekeeper and a freeholder, from an over-wracked Tenant, and an unthrift.

This is the Countrey where *Rowland Vaughan* began his Waterworks; and I can name you a great number of admirable contrivers for the publick good.

The Lord *Scudamore* may well begin to us; a rare example, for the well-ordering of all his family, a great

preſerver of woods againſt the day of *Englands* need, maintaining laudable hoſpitality regularly bounded with due ſobriety, and alwayes keeping able ſervants to promote the beſt expediencies of all kinds of Agriculture. And Sr. *H. L.* hath heartily proſecuted the ſame encouragements. Our learned Mr. *B.H.* drives on the ſame deſign, as far as the glances of a moſt ſedulous imployment will permit. Mr. *K.* of *L.* is excellently apt, and conſtantly diligent in the purſuit as well of delicacies, as neceſſaries. Mr. *S.* of *W.* hath in few yeares raiſed an under-tenement, from 8$^{l}$. yearly, & ſo rented, to be well worth 60$^{l}$. yearly, and ſo rented, or thereabouts. He never failes in any point of good husbandry. Mr. *F.* of *B.* hath raiſed his poor paſtures from the value of 2$^{s}$. -- 6$^{d}$. to be better worth than 20$^{s}$ yearly. *C.M.* hath metamorphoſed his wilderneſſe to be like the Orchards of *Alcinous*; herein alſo a hearty

hearty patriot. I must cease to name men, since in every village there is some excellent republican.

With one sad note I must now conclude this discourse. I wish this sore proverb, *Bona terra, mala gens*, may not belong to us. The most High hath filled us with his blessings, but we fail so much in returning due thanks, that we many times turn his blessings into heavy curses, and make his liberall gifts the prevailing cause of our hasty ruine. And whereas the rurall life should in all reason be the most humble, tame, and innocent: yet daily experience sheweth, that where any Trade of Manufacture is driven on, there the word of God beares a price: Where Trade thrives not, there the word of God is at the best but as a pleasant song: if sometimes they hear it, yet seldome they obey it. And all doors and highwayes are oppressed with idle and sturdy vagabonds: and it is more easy

ſy for an honeſt Iuſticiary to do the work of *Hercules* in cleanſing the *Augæan* ſtable, than to remedy ſuch a cuſtomary and prevailing evil. Our freſh expectation is, that ſome worthy Patriot will break through the difficulties of an obſtructive people, and force open a way for trade and commerce. Let our prayers and importunities preſs on all true-hearted patriots thus to advance the publick. For this adventure is, without diſpute, ſure of a reward in heaven, and not only free from the envy of men, but alſo alwayes acknowledged to deſerve everlaſting Monuments of glory. And thus alſo in the perſon of another (as under a fit vail of modeſty) I briefly hint unto you, what eſteem we do truly ow unto your labours. I pray the Lord to remember your diligence in the great day of his appearance in glory.

*May* the 3d. 1656.

Your hearty well-wiſher, and obliged ſervant in the Lord, I. B.

Sir,

SIR,

HAving imployed one day upon a long letter to you concerning Orchards and the Culture of *Herefordshire*, and the Messenger being not yet gone, I shall now add somewhat, or at least summe up the result of my former discourse.

The ground for an Orchard should rather incline towards the South than towards the North: yet no necessity of niceneſſe in that point. They prove well towards the North. So rather towards the rising Sun, than towards the West. Yet the West wind is the best, and the Western Sun best ripening. And the blasts commonly come from the full South, and about Noon: wherefore we pray with the Psalmist, to be delivered from the evil that flieth at Noontide.

Yet a diligent observer may find that the hurtfull winds are apt to gather

ther into channels upon the ſurface of the earth, as the ſtreams of water do: and a man may find by his eye and reaſon, and ſee it confirmed by anniverſary experience, that at a miles diſtance one point of the heavens is far more agreeable, or more hurtfull than another, either by the conduct of hills and vales in the neighbourhood, or at diſtance, or by vapours ariſing from lakes, rivers, or mooriſh grounds, which by froſts are turned into blaſts. For we have confirm'd it into a proverb, that dry froſts do not blaſt, but moiſt froſts, and froſts following after rain do: and dampy grounds make froſts that would be drie in other places, become moiſt in the neighbourhood. Alſo ſometimes in a very bottome the air is penn'd ſo cloſe, and the Suns heat ſo multiplyed by reflections, that it is apt to gather the Southern blaſts (which, as I ſaid, are the more frequent, and more hurtfull to the

the nicer fruit, and to hops, ) as in a furnace or oven.

If the cruſt, or richer ſurface of the earth be near a foot deep, it is fully enough: and if the cruſt of the earth be deeper, yet I have ſeldome ſeen any of our ſtocks ſet more than a foot deep, except they be great ſtocks, which ſhould keep their former depth.

If the ground be equable, that is, in any proclivity relating towards a levell, then it is pity to ſtock it with naturall plants. The more expedite way were in *October* to ſettle crab-ſtocks at thirtie foot diſtance in the forementioned beſt order, *per quincuncem*: and after three yeares, the next following Spring, ſend for an Artiſt to graft them with the beſt fruit.

The Crab-ſtocks ſhould not be above the bigneſſe of a mans hand-wriſt: if bigger, 'tis leſſe apt to cloſe with the graft, and then the rain finds a hole,

hole, to the danger of the ſtock. Our uſuall cuſtome was, upon the plain ſtock to ſet two or three grafts, which (for variety) might be different, without any hazzard or dammage. Of late many do ſlope the ſtock for one onely grafte conceiving this the more certain way to unite the ſtock and graft fully and ſpeedily. In a Nurſery, if the ſtocks be as ſmall as twigs, the ſureſt and ſpeedieſt way is by the joynt-graft, where no leſſe than eight ſides are engaged, and this is an improvement of the laſt ſtamp.

We cannot truſt to any Artiſt, but have need to uſe a true and carefull friend in the choice of grafts from the fruitfull branch of a ſound and fruitfull tree. And an errour in this point (beſides the miſtake of the fruit,) may prorogue the reward for five yeares or more, which is a ſad loſſe. *Columella*'s former note is worthy to be remembred in this point.

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If the ground be very unequall, 'tis a great charge, and a very grosse vanity to levell it. For there is a kind of beauty, and a sure refreshment in a wilderneſſe; at leaſt it is a good foyl if appendant to a pleaſant garden. And it may be better, more kind, and more fruitfull, moſt certainly more fit for variety, and for all change of ſeaſons by inequality, than by equality. And this is the ground that is fitteſt for the naturall apple, who is then wronged, maymed or wounded, when he is hindered from his naturall courſe, or forced into order. Yet I ſhould not plant him in ſuch bottoms, where the water cannot paſſe away: the deſcent were beſt for his ſituation.

The apples we commend for grafts, are the Stockin-apple, the Iellyflower-apple, the Well-apple, the Eliot, the Queen-crab, the quince-apple, the Winter-quining, the Harvey, the William, the Lenard, the

Iohn-

Iohn-apple, the Snouting, not forgetting the pearemain, and pippin, & leather-coat. Theſe, and many more that are nameleſſe, are for the Table.

For cider, the ſtreak't muſt is moſt commended; but tis but a kind of ſhrub or hedge-plant, not apt to grow to a large tree, and ſpending ſtrength ſo thick and ſo conſtantly, that the planter commonly ſurvives to ſee the decay of his own work. There is a white muſt, much commended for a ſtrong luſty cider, the tree long laſting. Another white muſt hath this fault; they abide not on the tree, to be gathered together, but are alwayes dropping one after another.

I need not note ſuch cautions as may affoord choice for all ſeaſons, early and late, and in the firſt ſtocking of the ground to plant peares and apples alternatively, at leaſt if we have no certainty of the nature of the ground; and there is a beauty as well

well as profit in variety : and peares grow long before they take up much room, and for the moſt part begin to be in perfection, when the grafted apple is decayed. Or a Winter-apple, which laſts longer, and growes ſlower, may be alternative to a cider-apple.

The clay-land binds the tree faſter from wind-ſtrokes, the ſandy-land haſteneth the growth more. By rowes of Elmes every Orchard and Village is generally fenced from the North and North-Eaſt wind: yet no neceſſity.

For Hops, we make haſt to be the chief hop-maſters in *England*; our Countrey having ſtore of Coppice-woods, and many provident men within theſe three yeares planting abundance of the faireſt & largeſt ſort of hops. All about *Bromyard* in a baſe ſoyl there is great ſtore. At firſt we adventured only upon deep, low, rich and mooriſh grounds: now we

climbe up the hills with wonderfull ſucceſſe. We find alſo that the bottoms are apt to gather heat as an oven (as is aboveſaid) and that begets hony-dewes, when the more open air eſcapes it.

Our Poets new and old, and all beſt judgements do highly commend the pleaſure of a Grove, *Scriptorum chorus omnis amat Nemus, & fugit urbes.* We do commonly deviſe a ſhadowy walk from our Gardens through our Orchards (which is the richeſt, ſweeteſt, and moſt embelliſht grove) into our Coppice-woods or Timber-woods. Thus we approach the reſemblance of Paradiſe, which God with his own perfect hand had appropriated for the delight of his innocent Maſterpiece. If a gap lyes in the way between our Orchard and Coppice, we fill up the vacancy with the artificiall help of a hop-yard. Where a buſy weed gives the ſhape of a wood.

Horat. l. 2. Epiſt. 2.

This

This muſt content us, 'till we can gain the credit of a Vineyard, which as yet hangs between hope and fear. The late dry Summers did ſwell us with hopes; the later fickle Spring & moiſt Autumn did blaſt, or drown our expectation.

Some ſow acorns, and aſh keyes, and other ſeeds for Woods, in wild and hilly grounds. Others count it much better to plant quick-ſets, which make more haſt, and may be more reducible to the beauty of order.

Before we adventure for Woods upon untryed ground, 'tis not amiſs to make uſe of Sr. *Hugh Plats* his augur. My ſelf having bought a ſmall tenement, thought it worth the while to ſee the nature of mine own land, for nine foot depth, which was ſoon done. By that I found where ſand, where ſtone, and where marle of the beſt ſort were neereſt at hand: I found the reaſon why

one piece of arable was more cold and moiſt, and leſſe fruitfull than another.

We have a belief, that the moſt barren ſurface hath the richeſt entrailes, not only of metallick Mineralls, but alſo of ſtone, yea of marle, or ſome other rich materiall. And this is certain, that which we eſteem the richeſt land, & buy it at the dearеſt rate by far, that is in many reſpects the pooreſt land: as for example, our richeſt land is eſteemed to be on *Frome* banks, the paſture very rich, the arable a ſtiff clay bearing the beſt wheat; yet this clay is very unkind for Gardens, it does devour much compoſt. It is a ſlow ground for Orchards; the arable is much inclinable to mildewes: if we have need to turn it into paſtures, though we have great advantages of land-flouds, or other fat waters, and the ground ſeem very likely for paſture, yet it is almoſt as good to give it away, as to

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go about to turn it into paſture. I have ſeen, that in twenty yeares it gathers not a turf, or ſward. Yea lately, the want of winter-flouds two years together left the beſt paſtures as bare, hard, ſtarvy, chapt and cheany, as the baſeſt land on the *Welſh* mountains. And if the arable be there once out of heart, or miſſe of one courſe of plowing, it is coſtly work to recover it.

On the contrary, in many places of the hot rye-land, where the paſtures have a courſe ſea-green blade, or ſhort and poor, and where the fields refuſe wheat, peaſe, and fitches, there ſheep thrive beſt, and their dung ſuddenly recovers the arable, which is light, and eaſie for a weak team: in three or four yeares 'tis at the beſt for ſuch paſture as it proves. The paſtures quickly improved by fatting ſheep there, that may ly upon it night and day. The land quick for Orchards, or any ſort of trees, as well the talleſt Elmes, as the Aſh: eaſi-

ly fitted for Gardens, for hemp, flax, turneps, parsnips, &c. Hence you may judge which of these were more worthy to be called the richer land: if the rich water-flouds did not give the rich pastures the advantage on one side. And hence you may see what a prevalency there is in the advantage of pasture onely.

I have seldome seen pastures forced by Compost in this Countrey, as I have seen it elsewhere. Onely in the Winter we feed our cattel on the higher pastures, and in the hazzard of a rot, some follow the directions of *Gabriel Plats*, in putting out their sheep all nights; which hath proved a safeguard to the sheep, and a great help to the pasture. Other helps of pasture we do not omit, every rill of water is carefully conducted to the best use. If it runs from a fat stream, land-floud, or lime-stone, we finde benefit in it, if withall we let it passe over and away, before it exchangeth

it's

it's fatneſſe into a cold hunger, which falls out in very few dayes. Some water we find ſo hungry, that we dare not receive it, but at ſeaſons of neceſſity. Lime we have ſeldome tryed upon paſture. Aſhes we find excellent to beget the white and purple hony-ſuckle, if ſifted on the ground in *February*, till it hath half candyed the ground, like a hoare-froſt. Our beſt *Engliſh* hay-ſeed is by experience found to be our more naturall friend.

Our graſiers, which are butchers, do find this fault in the excellent paſtures ſtored with gilt-cups, which is a kind of crowfoot, that it makes the fat of their beef look yellow, as if it were of an old beef.

The hony-ſuckle and delicate graſſe we ſort for cowes, the ſowrer for the breed of young cattel, the harder and ſtronger for labouring Oxen; and if it be rough, and little better than ſheep-paſture, tis the bet-

ter for Horſes, to mend the breed of them for the ſaddle. In an hyperbolicall exceſſe, for the fuller illuſtration, I may ſay, that a Nag fed upon high grounds and dry grounds is, for travell, as much beyond a Nag I bred in the lower medows, as a lion exceedeth a cow in activity. For a bag to market, or a cart, you may breed them in the lower meadows, & you ſhall ſee them big-limm'd, well-truſs't, & apt to tire themſelves with their own bulk and weight. The other that are bred on dry-ground, are airy and ſinewy, full of ſpirits and vigour, in ſhape like the barbe: they rid ground, and gather courage and delight in their own ſpeed. Thus colts well choſen, and ſheep well ordered, may be a rich help to repair the diſtreſſes of dry paſture.

For ſheep we are skill'd beyond the rules of *Gab. Plats*. Our wooll being the fineſt of *England*, and our ſheep ſmall, and not bearing above

16.

16. ounces ordinarily, (yet I have ſeen our faireſt Weathers bear thirty ounces of wooll) being ſmall and nice, they are generally houſed by night, Summer and Winter. And are therefore liable to two kinds of rot: the one is onely of the liver at firſt, and if it be diſcerned, tis cured by the butchers knife, without much loſſe to the owner; the other rot prevails over the whole body of the ſheep, & makes the fleſh fit for nothing but dogs. I know ſome places, in which there hath not been a rot in the memory of any of the inhabitants; but there they change often, becauſe the ground is very ſtony, and in two or three years wears out their mouthes: And nothing preſerves ſheep better than change of ſoyl. Our common husbandmen keep their ſmall flocks at all adventure without much care or caution. But for larger flocks our ſhepheards of *Lemſters-oer* and *Irchinfield* are moſt incomparably expert.

Whilſt

Whilst this letter is under my hand, by a conference with Mr. *S.* concerning Orchards, I am assured, that upon a long trial (as in a way of conteſtation) it was found experimentally, that ſome apples raiſed of kernels did exceed the beſt that could be found of grafted apples in delicacy of taſt.

That he tried to meliorate the *Kentiſh* Codling, by a graft of the ſame kind, and it proved worſe.

That a near neighbour made a hogſhead of cider of *Kentiſh* Codlings onely: he taſted it this very week. It had a taſt far differing from all our other cider, not bad, nor very excellent. That it looks like perry, of a wheyiſh colour.

He alſo gave me at his own houſe a moſt pleaſant drink, which I thought to be cider, and preferr'd it before red-ſtrak't cider, which was of the beſt, and, for triall, brought out to me and others at the ſame time.

This

This commended drink was compounded of crabs never hoorded, but ſhaken from the tree, and immediately ground together with perry of that luſhious kind, which at this time of the year is alwayes wont to be roapy. This drink was not clear, but had ſome reſemblance of roapy perry. But he aſſures, that the crab does by this compoſition alwayes preſerve the perry from being roapy. If ſo (as of all men I can beſt believe him, who will not break his word to ſave his life) this is an excellent art, at one time to make Crabs, which grow naturally in all wild, dry, and barren ſoyl, a rich fruit; and by them alſo to make a rich benefit of thoſe peares, which in the language of another good husband were called a Cumberſome Weed.

He preſcribeth, that the more luſhious the peare be, the more crabs be added to it. By the taſt in the mill, you may fit it, generally more peares than

than crabs. He noteth that these crabs were not of the fore-mentioned *Bromsbury* crabs, but common crabs: of which common crabs he advertiseth there are two sorts. The first soon ripe, and yellowish, and fit to be mingled with the peares that are first ripe. And of this kind was the cider that he gave to us. The other is a more sullen crab, green about the end of Autumn. This agrees with it's contemporary peares. Or to make a kind of *Scythian* wine, fit to quicken the palat of a sturdy hinde, they may be laid in heaps, for a months hoording, and then ground by themselves, or with Winter-apples. We know how welcome to forreign peasants, and also to our seamen, a rough vinegar or verjuice would be, either to mingle with pottage, or with water for drink. We have not yet felt so much want in *England*, as were necessary to teach us the use of crabs, or other generall branches

branches of frugality. The *Bromsbury* Crab, so often mentioned, is far larger than either of the other sort, and in shape like an apple.

Sir, 'Tis time I should now give you rest. In this you may see my hearty desires towards the improvement and wellfare of our Native Countrey. If we must be hindered of Trade with *Spain*, I wish our *English* indignation would scorn to feed at their tables, to drink of their liquors, or otherwise to borrow or buy of them, or of any of their confederates, as long as our native soyle did supply us with necessaries. I pray God to strenghthen us all in a firm love to his holy truth, and in a mutuall love to each other, under the shelter of his everlasting Mercies.

*Hereford* May 13. 1656.

Your servant in the Lord, *I. B.*

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*An extract of Mr.* Hartlibs *letter dated* September 4. 1656.

He desires, that these letters may be

be presented to publick view, for an example to worthy men in other Countreys to do the like in these, and other parts of Husbandry. That the Latine passages should be turned into the vernaculous Language, and many expressions altered into more plain and common *English*, that all vulgar capacities may understand them, &c.

*The Answer.*

1. That it is now too late to polish any parts of those letters with such accurateness, as becomes a piece drest for severe judgements. If it must fly abroad, it must go as it is, all parts alike, in the free garb of a naturall simplicity; written with speed, and with more care of truth, than of fit words.

Instead of a Translation of *Columella's* sentence *pag.* 12. *lin.* 19. I would annex this short *English* gloss; That which is far fetcht, may have little familiarity with our soyl, and may

may a long time take it unkindly to be baniſht from its native place.

I dare not adventure for an exact tranſlation, having no other edition but that of *Hieron. Commeline* 1595, which is ſo full of errours, that I ſuſpect every line. It were an excellent work, if any man would publiſh a well-corrected copy of the four *Roman* Husbandmen, they being rare Monuments of Antiquity; the firſt, namely that of *Cato* the Cenſor, being almoſt 2000 yeares old. Being now deſtitute of Libraries, if I ſhould undertake it, having no one old exemplar upon which I ſhould frame my conjecture, at the beſt ſucceſſe, I ſhould ſhew more wit than honeſty. For I hold it a moſt pernicious preſumption, to intrude our own phanſies inſtead of ſuch great Authorities.

*Page* 25. *line* 23. the Latine may be untranſlated, being but a rationall inference, to authorize that which is there ſaid in *English*.

*Page* 27. *line* 9. *To the worlds end.* I uſe theſe words in a vulgar ſenſe. For in very truth, and well-grounded Theology, we have no reaſon to conceive it to belong now, before the world ſhall be

be changed or consumed by the last fire.

*Pag.*28.*line* 5. To explain this *per Quincuncem* to the dullest, we may add these *English* words; as in a diaper-napkin, or in common glasse-windows, which is the rhombular figure.

I dare adventure to use no more than the first letters of some mens names, least I have blame for my good meaning. As in this I have merited little, so I expect no better reward: yet you have very much obliged me ever to subscribe,

Yours unfeignedly

*I. B.*

The Reader may be further advertised, that upon Mr. *Hartlib*'s motion, the argument of *Herefordshire Orchards* is by the same hand explained, confirmed, and for all capacities amplified on a much larger discourse, reduced to the form of a familiar dialogue, and now coming forth.

*FINIS.*

MVSEVM BRITAN NICVM